Claims:

1. An expandable medical device comprising:

a plurality of elongated struts, said plurality of elongated struts joined together to form a substantially cylindrical device which is expandable from a cylinder having a first diameter to a cylinder having a second diameter, said plurality of struts each having a strut width in a circumferential direction and a strut thickness in a radial direction;

at least one opening in at least one of the plurality of struts; and

at least one beneficial agent provided in the at least one opening in a plurality of layers.

2. The expandable medical device according to Claim 1, wherein the at least one opening extends at least partially through the thickness of said strut.

3. The expandable medical device according to Claim 1, wherein said at least one opening comprises a plurality of openings.

4. The expandable medical device according to Claim 1, wherein said at least one opening extends through the thickness of said at least one strut, so as to thereby define a through opening.

5. The expandable medical device according to Claim 1, wherein said at least one opening has a depth less than the thickness of said at least one strut, so as to thereby define a recess.

6. The expandable medical device according to Claim 1, wherein said plurality of beneficial agent layers include layers of different chemical compositions.

7. The expandable medical device according to Claim 6, wherein said different chemical compositions include a barrier composition and an active beneficial agent composition.

8. The expandable medical device according to Claim 7, wherein said barrier composition has an opening formed therein.

9. The expandable medical device according to Claim 6, wherein said different chemical compositions include different active beneficial agents.

10. The expandable medical device according to Claim 9, wherein said different active beneficial agents include anti-thrombotic agents and anti-proliferative agents.

11. The expandable medical device according to Claim 1, wherein said plurality of beneficial agent layers include layers of beneficial agent having the same chemical composition in different concentrations.

12. The expandable medical device according to Claim 1, wherein said plurality of beneficial agent layers include a barrier layer at a radially innermost location in the at least one opening.

13. The expandable medical device according to Claim 1, wherein the plurality of beneficial agent layers include a barrier layer between two active beneficial agent layers.

14. The expandable medical device according to Claim 1, wherein said beneficial agent is formulated to be activated by a systemically applied agent.

15. The expandable medical device according to Claim 14, wherein said systemically applied agent is ultrasound.

16. The expandable medical device according to Claim 14, wherein said systemically applied agent is a chemical agent.

17. The expandable medical device according to Claim 1, wherein the beneficial agent is contained in microspheres.

18. The expandable medical device according to Claim 17, wherein said plurality of layers include layers with microspheres of different sizes.

19. The expandable medical device according to Claim 1, wherein the opening has a shape configured to vary the release rate of a beneficial agent over time.

20. The expandable medical device according to Claim 1, wherein the beneficial agent is provided in the opening in a biodegradable carrier.

21. The expandable medical device according to Claim 1, wherein the beneficial agent is configured to diffuse from a carrier in the opening.

22. The expandable medical device according to Claim 1, wherein the beneficial agent layers include a bio-degradable barrier layer configured to terminate a therapy at a predetermined time.

23. The expandable medical device according to Claim 1, wherein the beneficial agent is paclitaxel, or an analogue or derivative thereof.

24. The expandable medical device according to Claim 1, wherein the beneficial agent is rapamycin, or an analogue or derivative thereof.

25. The expandable medical device according to Claim 1, wherein the at least one opening comprises a plurality of openings containing the beneficial agent and a plurality of openings remaining open for anchoring purposes.

26. The expandable medical device according to Claim 1, wherein the plurality of beneficial agent layers are substantially cylindrical.

27. An expandable medical device comprising:

a plurality of elongated struts, said plurality of elongated struts joined together to form a substantially cylindrical device which is expandable from a cylinder having a first diameter to a cylinder having a second diameter, said plurality of struts each having a strut width in a circumferential direction and a strut thickness in a radial direction;

at least one opening in at least one of the plurality of struts; and

at least one beneficial agent provided in the at least one opening, wherein a shape of the beneficial agent is configured to achieve a desired agent delivery profile.

28. The expandable medical device according to Claim 27, wherein said at least one opening comprises a plurality of openings.

29. The expandable medical device according to Claim 27, wherein said at least one opening extends through the thickness of said at least one strut, so as to thereby define a through-opening.

30. The expandable medical device according to Claim 27, wherein said at least one opening has a depth less than the thickness of said at least one strut, so as to thereby define a recess.

31. The expandable medical device according to Claim 27, wherein the at least one beneficial agent is a substantially conical plug configured to achieve an continuously varying agent delivery profile.

32. The expandable medical device according to Claim 27, wherein the at least one beneficial agent is a substantially spherical plug configured to achieve a substantially sinusoidally varying agent delivery profile.

33. The expandable medical device according to Claim 27, wherein the at least one beneficial agent is a plug and a filling material surrounds the plug in the opening.

34. The expandable medical device according to Claim 27, wherein the opening is configured in a non-cylindrical shape to achieve the desired agent delivery profile.

35. The expandable medical device according to Claim 27, wherein the beneficial agent is paclitaxel, or an analogue or derivative thereof.

36. The expandable medical device according to Claim 27, wherein the beneficial agent is rapamycin, or an analogue or derivative thereof.

37. The expandable medical device according to Claim 27, wherein the at least one opening comprises a plurality of openings containing the beneficial agent and a plurality of openings remaining open for anchoring purposes.

38. An expandable medical device for treating cardiac arrhythmias, the device comprising:

an expandable cylindrical device having a plurality of struts;

a plurality of openings in the plurality of struts; and

a chemically ablative agent provided in the openings, wherein the openings are configured to deliver the chemically ablative agent to tissue surrounding the expandable cylindrical device without permanently trapping any agent in the openings.

39. The expandable medical device of Claim 38, further comprising a biodegradable barrier layer provided in the opening substantially adjacent an innermost surface of the cylindrical device.

40. An expandable medical device for treating cardiac arrhythmias, the device comprising:

an expandable cylindrical device having a plurality of struts;

a plurality of openings in the plurality of struts; and

an anti-arrhythmic drug and a non-biodegradable carrier provided in the openings, wherein the openings are configured to deliver the anti-arrhythmic drug to tissue surrounding the cylindrical device over an extended time period.

41. The expandable medical device of Claim 40, further comprising a non-biodegradable barrier layer provided in the opening substantially adjacent an innermost surface of the cylindrical device.

42. A method of forming an expandable medical device, the method comprising:

providing an expandable medical device with a plurality of struts, said plurality of struts joined together to form a substantially cylindrical device which is expandable from a cylinder having a first diameter to a cylinder having a second diameter;

forming at least one opening in at least one of the plurality of struts; and

delivering at least one beneficial agent into in the at least one opening in a plurality of layers.

43. The method according to Claim 42, wherein the least one opening extends at least partially through the thickness of said struts.

44. The method according to Claim 42, wherein said at least one opening comprises a plurality of openings.

45. The method according to Claim 42, wherein said at least one opening extends through the thickness of said struts, so as to thereby define a through opening.

46. The method according to Claim 42, wherein said at least one opening has a depth less than the thickness of the struts, so as to thereby define a recess.

47. The method according to Claim 42, wherein the beneficial agent delivered is paxlitaxel, or an analogue or derivative thereof.

48. The method according to Claim 42, wherein the beneficial agent delivered is rapamycin, or an analogue or derivative thereof.